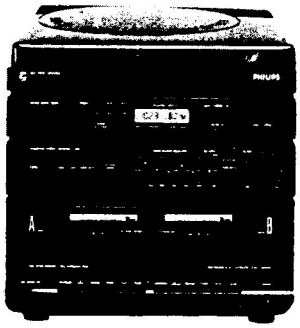
MIDI STACK F1385

/10/30/31/32/35/38/40

Service
Service
Service



Service Manual

For repair information of the cassette mechanism see
Service Manual of Recorders tape deck RX version
RX-4

For repair information of the record player
see Service Manual of Record Player
HP7D 277 not for /32
HP7D 277MQ only for /32

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Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviço

PHILIPS

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

Subject to modification

4822 725 22234

Printed in The Netherlands

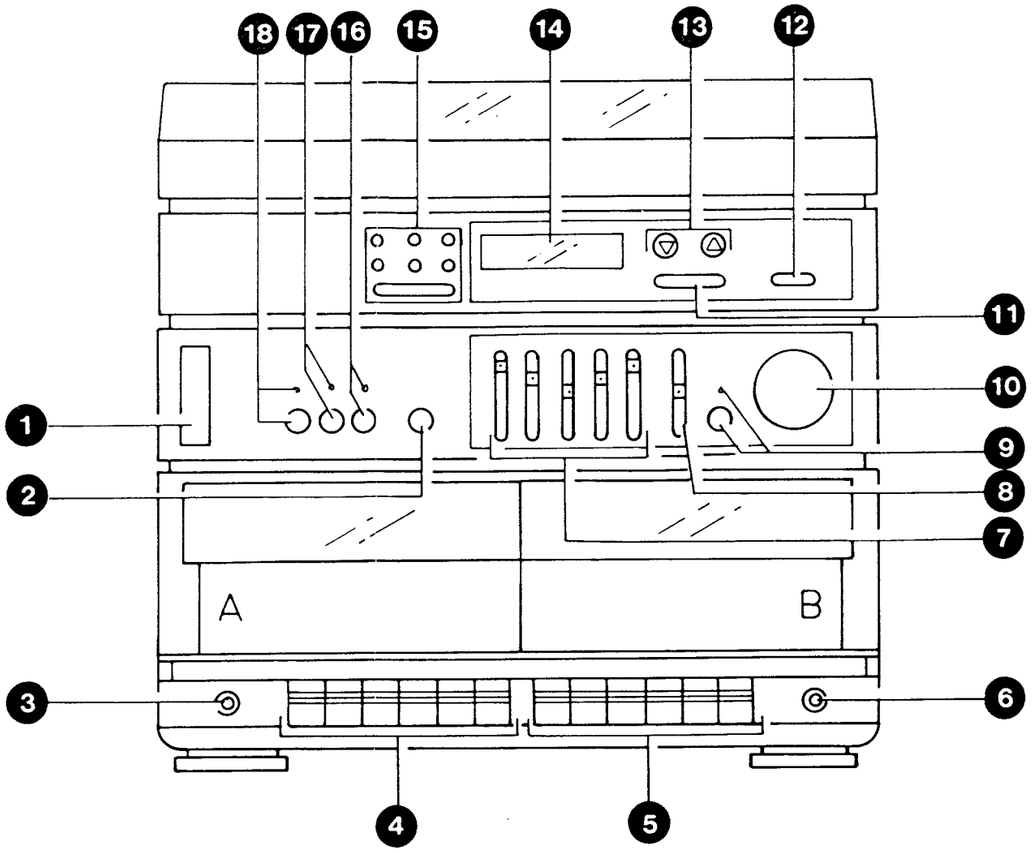
PHILIPS

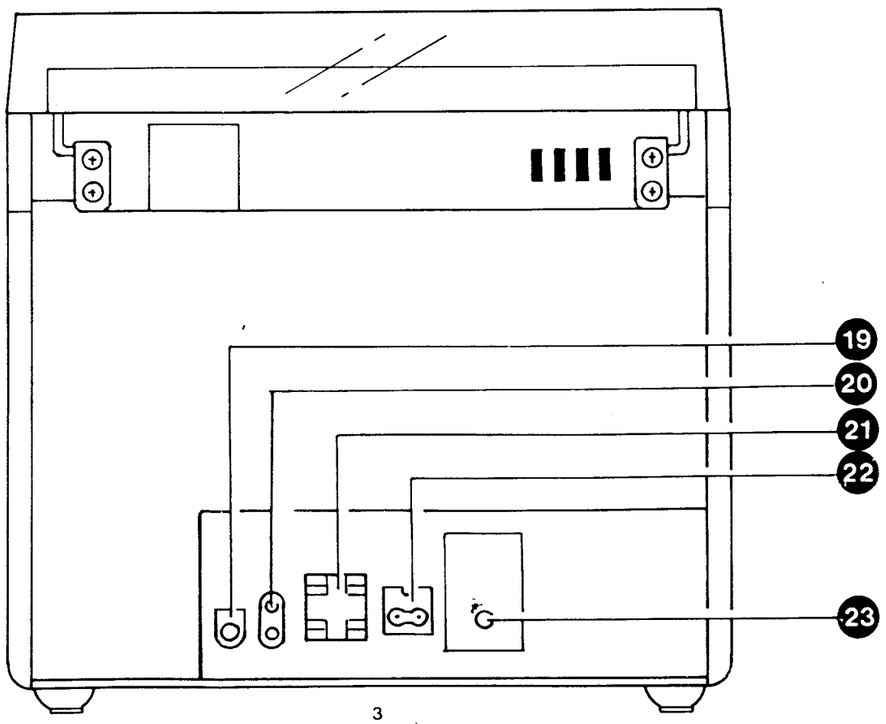
SPECIFICATION

		Typical value	Nominal value
General			
Mains voltage		: 120V-220V-240V	
Voltage selection		: Serviceable (set at 220V)	
		Switchable (Set to 220V) For -/31 only	
Mains Frequency		: 50-60 Hz	
Power consumption		: 80W max.	
Tuner: FM Section			
Tuning range		: 87.5 MHz - 108 MHz	
IF Frequency		: 10.7 MHz	
Aerial inputs		: 75 Ω coaxial	
Sensitivity		: 2 μV 26dB S/N	: ⩽ 2.5 μV 26dB S/N
Selectivity		: 35dB at 600 KHz bandwidth	: ⩾ 30 dB at 600 KHz bandwidth
IF Rejection		: 60dB	: ⩾ 55dB
Image Rejection		: 50dB	: ⩾ 40dB
Tuner: AM Section			
Tuning range	MW	: 522 KHz - 1611 KHz	
	LW	: 150 KHz - 263 KHz	
IF Frequency		: 450 KHz	
Sensitivity	MW	: 2 mV/M 26dB S/N	: ⩽ 2.5 mV/M 26dB S/N
	LW	: 2.5 mV/M 26dB S/N	: ⩽ 3 mV/M 26dB S/N
Selectivity		: 35dB at 18 KHz bandwidth	: ⩾ 30dB at 18 KHz bandwidth
IF Rejection		: 60dB	: ⩾ 50dB
Image Rejection	MW	: 40dB	: ⩾ 30dB
	LW	: 50dB	: ⩾ 40dB
Amplifier			
Output power		: 2 x 10W ±1dB, D = 10%	
Speaker impedance		: 8 ohm	
Frequency Response (within 3dB)		: 125 Hz to 10 KHz	
Equalizer control		: -6dB to + 6dB	
Dynamic Bass Boost		: +6dB	
Input Sensitivity	Aux./TV	: 300mV	: 400mV
	Mic	: 0.7mV	: 1mV
Cassette Recorder			
Number of tracks		: 2 x 2 (stereo)	
Tape speed		: 4.76 cm/sec ± 2%	
		: 2 x 4.76 cm/sec on dubbing	
Wow and flutter		: ⩽ 0.35%	
Fast-wind time C60		: ⩽ 130 sec.	
Bias system		: DC on AM position	
		: AC on FM/Tape position	
Bias Frequency		: 70 KHz ±15 KHz	
Recording playback frequency response (within 8dB)		: 100Hz to 6300Hz	
Signal to Noise ratio		: ⩾ 42dB on FM/Type position	
		: ⩾ 22dB on AM position	
		: ⩾ 38dB on dubbing	
Record player			
Type of PU Head		: Sapphire (Ceramic stereo)	
		: Diamond (Magnetic stereo)	
Stylus force		: 5.0 gmf + 1.5 gmf, -1gmf	
Speed		: 33/45 r.p.m. +3%, -1%	
Wow and flutter		: 0.3%	
Rumble		: -30dB (DIN. A)	
		: - 40dB (DIN. B)	

RECORD PLAYER

Adjustment	Set in position	Read on	Adjust with	Adjust to
Speed	Phono 33 r.p.m.	Stroboscope	Trimpot in turntable motor	33 r.p.m.
Speed	Phono 45 r.p.m.	Stroboscope	Trimpot in turntable pcb.	45 r.p.m.





Connections and controls:

1	Power ON/OFF	SK-L	8			3595
2	Speed selector	SK-H	9	Bass Boost		SK-P/7418
3		BU-6	10			3596
4	Tape deck A button :		11	Bandswitch		SK-N
		SK-G	12	Mono/Stereo		SK-M
		SK-G,SK-D,SK-K	13		Down	1111
		SK-G			Up	1112
		SK-G	14	LCD Display		7550
		SK-G,SK-K	15	Preset button		1114-1119
				Memory button		1113
5	Tape deck B button :		16	Phono/CD/TV		SK-E/7259
		SK-F	17	Tape		SK-E/7261
	Continuous play	SK-F,SK-J	18	Tuner		SK-E/7260
		SK-F	19	FM Aerial(75Ω)		BU-4
		SK-F	20	CD/TV		BU-3
		SK-F,SK-J	21		R, L	BU-2
			22			BU-5
6		BU-1	23	Voltage selector		SK-Q
7	Graphic Equalizer	3590-3594				

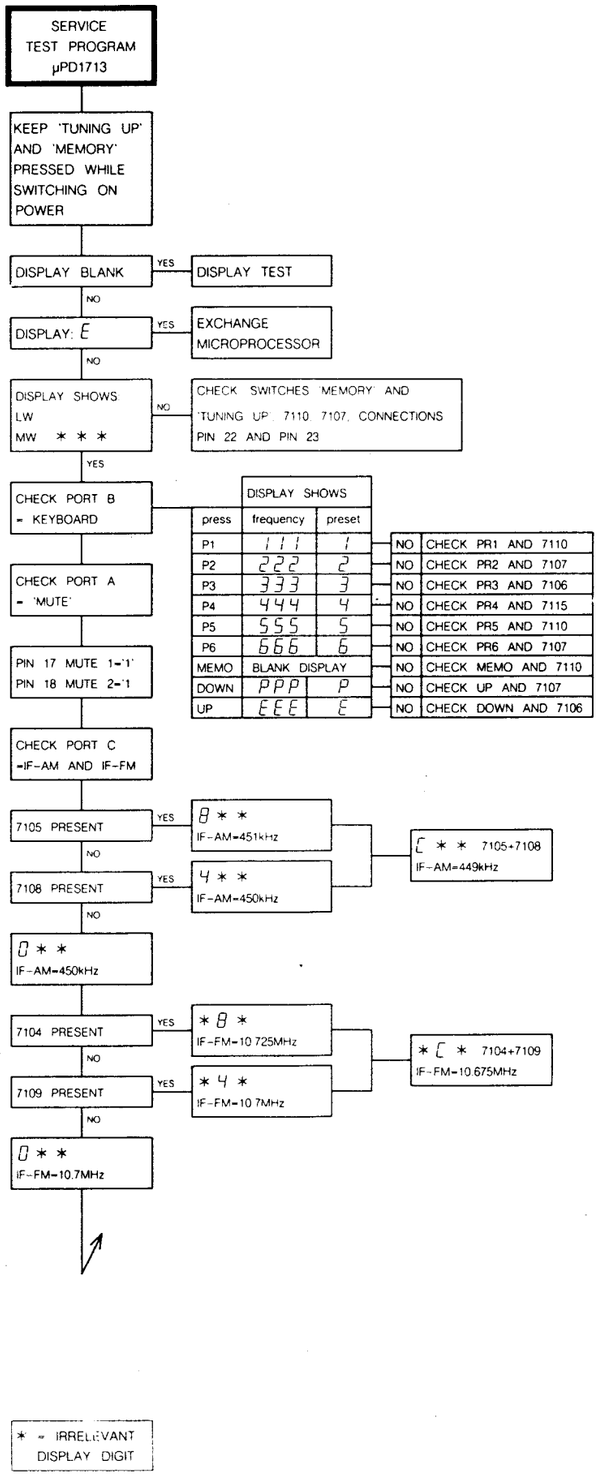
CASSETTE DECK

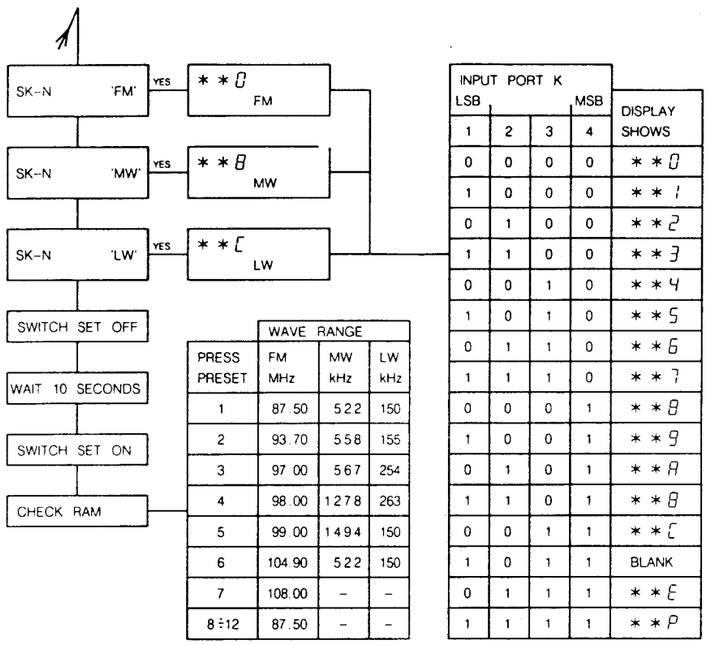
Adjustment	Cassette	Recorder position			Measure on	Read on	Adjust with	Adjust to
		SK...	Deck A	Deck B				
Azimuth	10KHz SBC 420*	Tape	Play	—	BU-1	mV-meter	Left hand screw Play head	max. output L = R
		Tape	—	Play	BU-1	mV-meter	Left hand screw R/P head	
Motor speed (Normal)	3150Hz SBC 420*	Tape	Play	—	BU-1	Wow and Flutter meter	preset in motor	**a
		Tape	—	Play	BU-1	Wow and Flutter meter	—	**a
Motor speed (High)	3150Hz SBC 420*	Tape High speed	Record	Play	BU-1	Frequency counter	—	6.0 ± 0.3 KHz

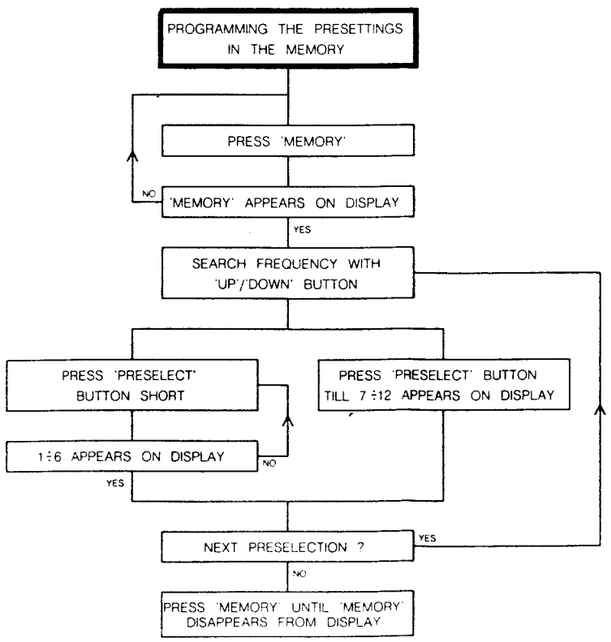
* SBC 420 : 4822 397 30071

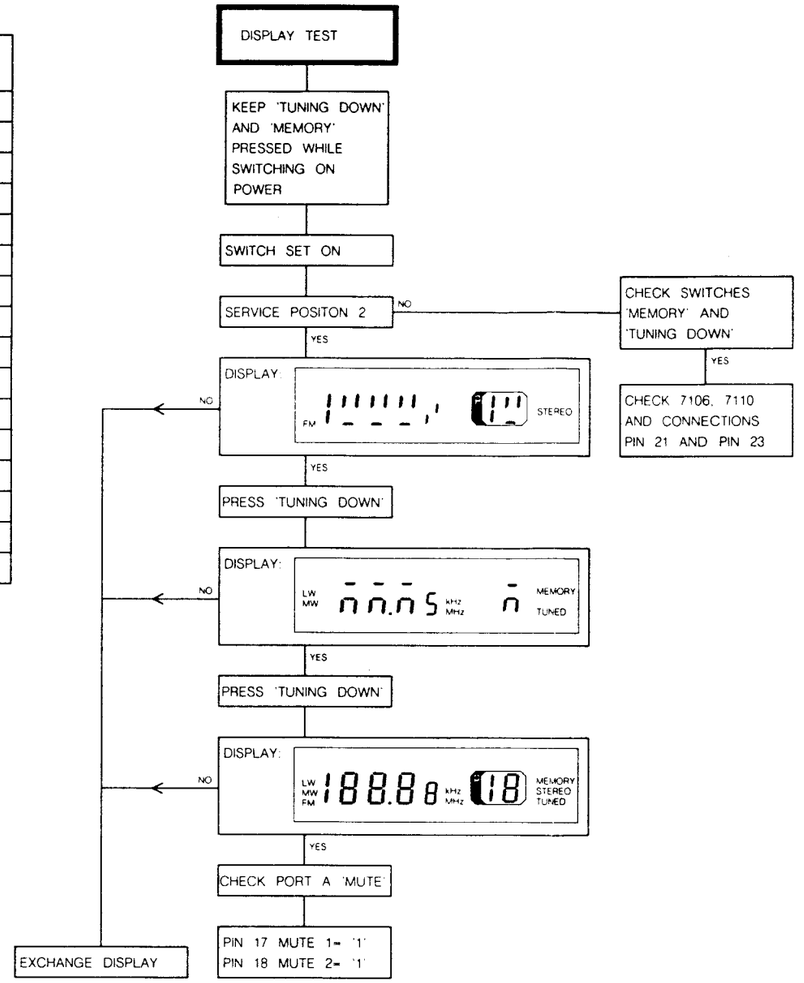
**a The maximum permissible speed deviation is 2%. Moreover, the wow and flutter value can be read. This value should not exceed 0.35%.

MICRO PROCESSOR CHECK

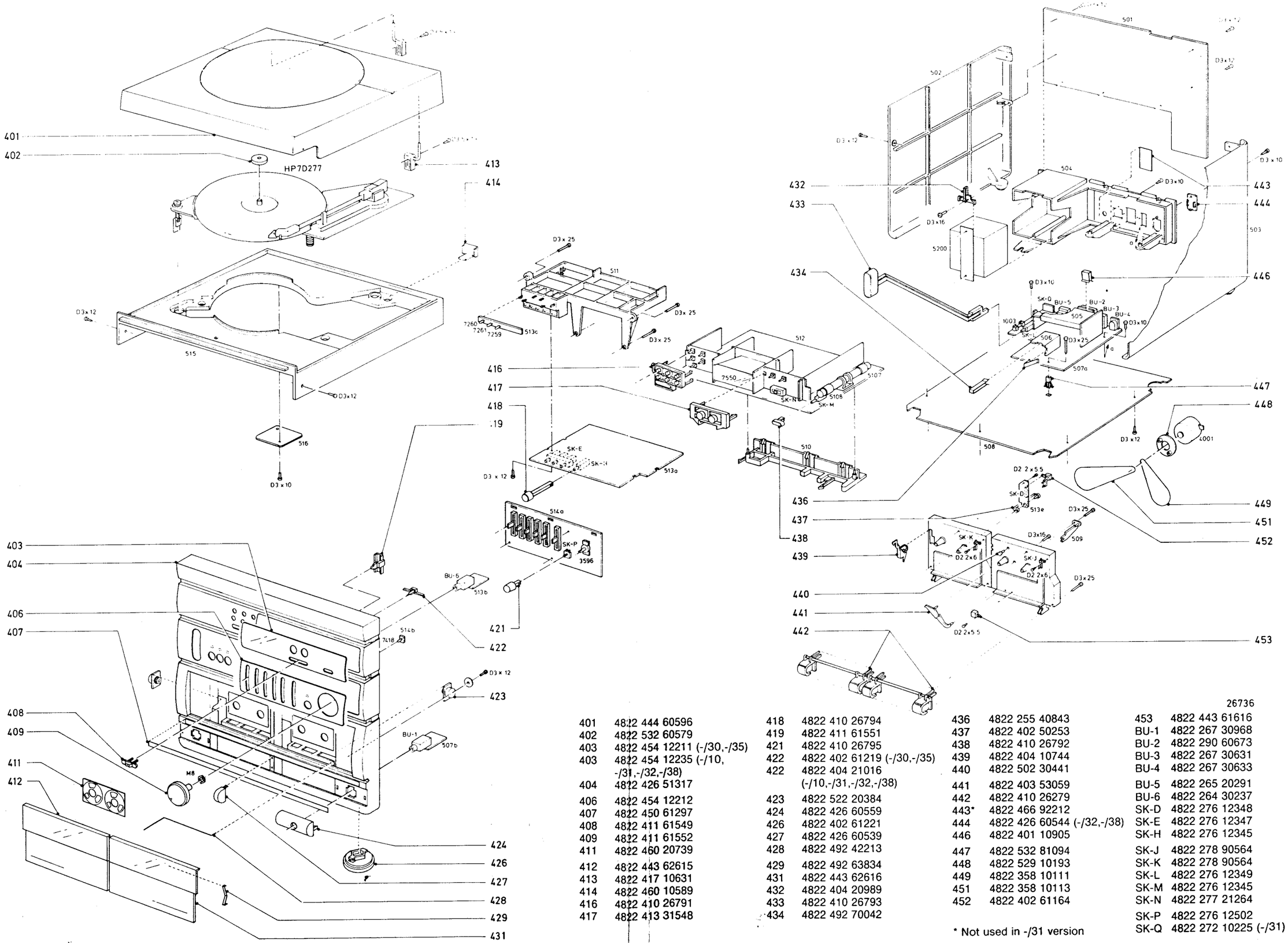

SERVICE TEST PROGRAM µPD1713
KEEP 'TUNING UP' AND 'MEMORY' PRESSED WHILE SWITCHING ON POWER
DISPLAY BLANK
YES
DISPLAY TEST
NO
DISPLAY: E
YES
EXCHANGE MICROPROCESSOR
NO
DISPLAY SHOWS LW MW * * *
NO
CHECK SWITCHES 'MEMORY' AND 'TUNING UP' 7110, 7107, CONNECTIONS PIN 22 AND PIN 23
YES
CHECK PORT B = KEYBOARD
DISPLAY SHOWS
press | frequency | preset
P1 | 111 | 1 | NO | CHECK PR1 AND 7110
P2 | 222 | 2 | NO | CHECK PR2 AND 7107
P3 | 333 | 3 | NO | CHECK PR3 AND 7106
P4 | 444 | 4 | NO | CHECK PR4 AND 7115
P5 | 555 | 5 | NO | CHECK PR5 AND 7110
P6 | 666 | 6 | NO | CHECK PR6 AND 7107
MEMO | BLANK DISPLAY | NO | CHECK MEMO AND 7110
DOWN | PPP | P | NO | CHECK UP AND 7107
UP | EEE | E | NO | CHECK DOWN AND 7106
CHECK PORT A = 'MUTE'
PIN 17 MUTE 1='1'
PIN 18 MUTE 2='1'
CHECK PORT C =IF-AM AND IF-FM
7105 PRESENT
YES
8 * * IF-AM=451kHz
NO
7108 PRESENT
YES
4 * * IF-AM=450kHz
C * * 7105+7108 IF-AM=449kHz
NO
0 * * IF-AM=450kHz
7104 PRESENT
YES
* 8 * IF-FM=10.725MHz
NO
7109 PRESENT
YES
* 4 * IF-FM=10.7MHz
* C * 7104+7109 IF-FM=10.675MHz
NO
0 * * IF-FM=10.7MHz
* = IRRELEVANT DISPLAY DIGIT







MDA 01584
T27/839



401	4822 444 60596	418	4822 410 26794	436	4822 255 40843	453	4822 443 61616
402	4822 532 60579	419	4822 411 61551	437	4822 402 50253	BU-1	4822 267 30968
403	4822 454 12211 (-/30,-/35)	421	4822 410 26795	438	4822 410 26792	BU-2	4822 290 60673
403	4822 454 12235 (-/10, -/31,-/32,-/38)	422	4822 402 61219 (-/30,-/35)	439	4822 404 10744	BU-3	4822 267 30631
404	4822 426 51317	422	4822 404 21016 (-/10,-/31,-/32,-/38)	440	4822 502 30441	BU-4	4822 267 30633
406	4822 454 12212	423	4822 522 20384	441	4822 403 53059	BU-5	4822 265 20291
407	4822 450 61297	424	4822 426 60559	442	4822 410 26279	BU-6	4822 264 30237
408	4822 411 61549	426	4822 402 61221	443*	4822 466 92212	SK-D	4822 276 12348
409	4822 411 61552	427	4822 426 60539	444	4822 426 60544 (-/32,-/38)	SK-E	4822 276 12347
411	4822 460 20739	428	4822 492 42213	446	4822 401 10905	SK-H	4822 276 12345
412	4822 443 62615	429	4822 492 63834	447	4822 532 81094	SK-J	4822 278 90564
413	4822 417 10631	431	4822 443 62616	448	4822 529 10193	SK-K	4822 278 90564
414	4822 460 10589	432	4822 404 20989	449	4822 358 10111	SK-L	4822 276 12349
416	4822 410 26791	433	4822 410 26793	451	4822 358 10113	SK-M	4822 276 12345
417	4822 413 31548	434	4822 492 70042	452	4822 402 61164	SK-N	4822 277 21264
						SK-P	4822 276 12502
						SK-Q	4822 272 10225 (-/31)

* Not used in -/31 version

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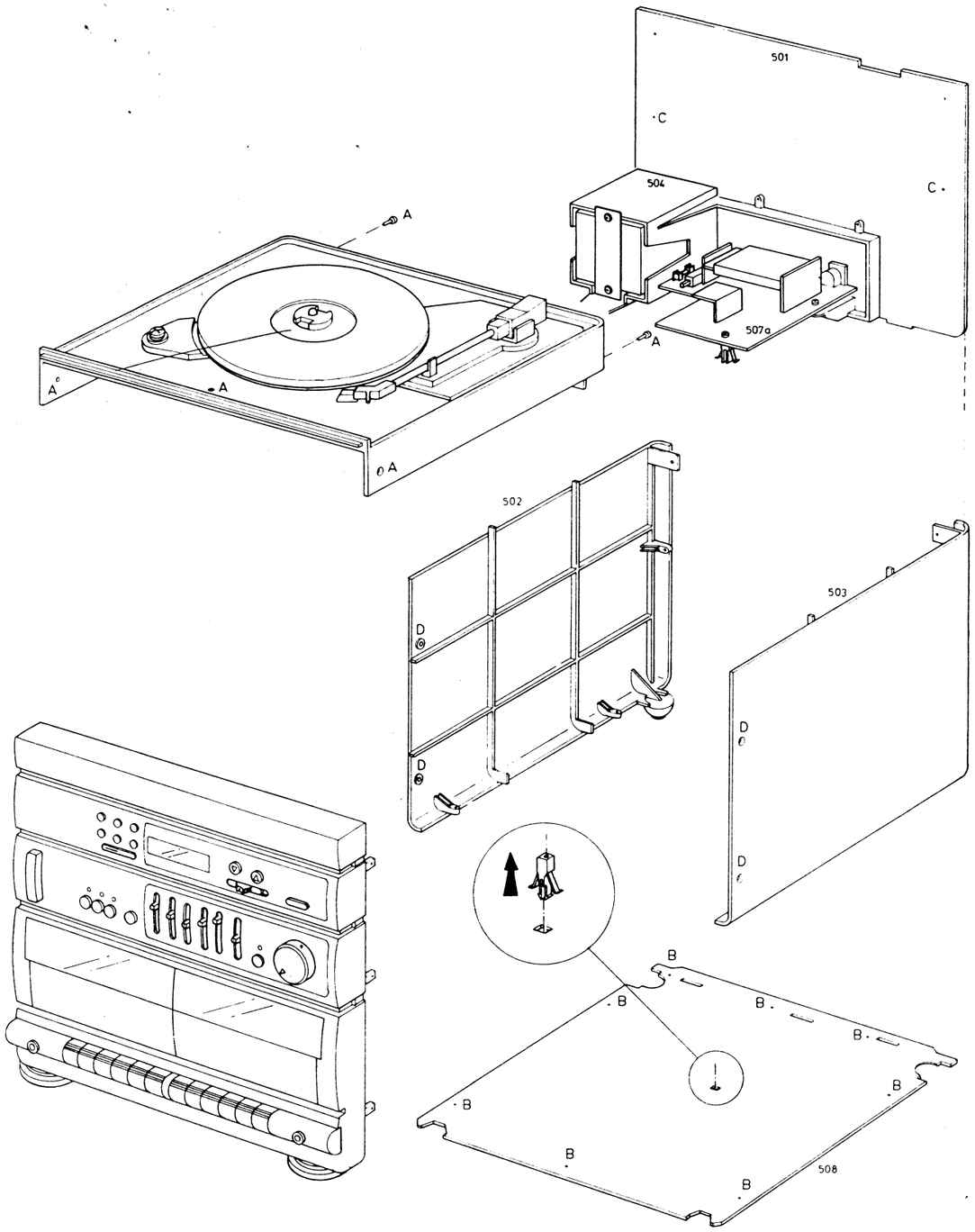


Disassembly sequence A (5 screws) – B (8 screws) – C (2 screws) – D (4 screws)

26738

After replacing 5113 (AM) or 5111a, 5111b and 5111c (FM)

SK						Diodes		
AM	≈ 450 KHz * Mod 1 KHz 30% AM	C via 100nF		generator frequency control	1 4	7105 + 1KHz	7108 - AM	AM - IF - freq.
						×	×	450 KHz
						×	▶|	450 KHz
						▶|	×	451 KHz
						▶|	▶|	449 KHz
FM	≈ 10.7 MHz Mod 1 KHz Δf = 22.5 KHz	B		generator frequency control	1 4	7104 +25KHz	7109 - FM	FM - IF - freq.
						×	×	10.7 MHz
						×	▶|	10.7 MHz
						▶|	×	10.725 MHz
						▶|	▶|	10.675 MHz

GB

1 Adjust the generator frequency so, that you receive a maximal and undistorted sine wave, Program this frequency according to the "Diodes"-table.

2 Adjust for maximum height and symmetry.

F

1 Ajuster la fréquence génératrice de façon que vous recevez un sinus maximal et indéformé. Programmer cette fréquence selon la table "Diodes".

2 Ajuster sur hauteur et symétrie maximum.

NL

1 Stel de generatorfrequentie zodanig in, dat u een maximale en onvervormde sinus ontvangt. Programmeer deze frequentie volgens de tabel "Diodes".

2 Afregelen op maximum hoogte en symmetrie.

D

1 Stellen Sie die Generatorfrequenz so ein, dass Sie eine maximale und unverzerrte Sinuskurve empfangen. Programmieren Sie diese Frequenz gemäss der Tabelle "Diodes".

2 Abgleichen auf Maximalhöhe und Symmetrie.

I

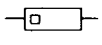
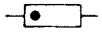
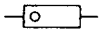
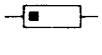
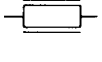
1 Regolate la frequenza del generatore in modo che ricevete un sinus massimale e indistorsionato. Programmate questa frequenza secondo la tabella "Diodes".

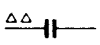
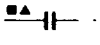
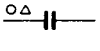
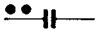
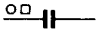
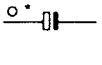
2 Regolare per un massimo di altezza e di simetria.

"Bei notwendigem Abgleich ist das Gerät auf die gesetzlich vorgeschriebenen Eckfrequenzen abzugleichen."

SK
Varicap ab
FM 87.5 - 10
LW 150-25
MW 522-161
FM-RF
Fr Ste
AM-IF
MW
AM-RF
MW
LW
* Mod 1 KH
Stereo decod
FM Ster

SK						
Varicap alignment						
FM 87.5 - 108 MHz			108 MHz	5105		① = 8V
			87.5 MHz			① ≈ 2V
LW 150-263 KHz			263 KHz	5106		① = 8V
			150 KHz			① ≈ 2V
MW 522-1611 KHz			1611 KHz	5106		① ≈ 8V
			522 KHz	check		① ≈ 2V
FM-RF						
FM Stereo	87.5 MHz	◇B	87.5 MHz	5104		④ max.
				5103		
	108 MHz		108 MHz	2139		④ max.
				2191		
AM-IF						
MW	450 KHz Δf = 5 KHz (50 Hz)	◇C via 100nF	1611 KHz	5109	Symmetrical max fo ② [2]	
				5110		
AM-RF						
MW	558 KHz*	◇A	558 KHz	5108		④ max.
	1494 KHz*		1494 KHz	2188		
LW	155 KHz*	◇A	155 KHz	5107		④ max.
* Mod 1 KHz 30% AM						
Stereo decoder						
FM Stereo			No signal	3163		③ 19 ± 0.05 KHz

	Carbon film 0.2 W CR16	70°C	5%
	Carbon film 0.33 W CR25	70°C	5%
	Carbon film 0.5 W CR37	70°C	5%
	Standard film 0.5 W SFR16T	70°C	5%
	Standard film 0.4 W SFR25	70°C	5%
	Metal film 0.6 W MRS25	70°C	5%
	Safety resistor		
Ⓒ	Chip component		

	Plate ceramic Tuning < 120 pF Others	2% —20/+80%
	Tubular ceramic	
	Polystyrene film / foil	1%
	Polyestor Film / foil	10%
	Mylar	10%
	Electrolytic	

* a = 2,5 V
b = 4 V
c = 6,3 V
d = 10 V
e = 16 V
f = 25 V
g = 40 V
h = 63 V
j = 100 V
l = 125 V
m = 150 V
n = 160 V
q = 200 V
r = 250 V
s = 300 V
t = 350 V
u = 400 V
v = 500 V
w = 630 V
x = 1000 V
A = 1,6 V
B = 6 V
C = 12 V
D = 15 V
E = 20 V
F = 35 V
G = 50 V
H = 75 V
I = 80 V

26338

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

ESD

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

a = 2.5 V
b = 4 V
c = 6,3 V
d = 10 V
e = 16 V
f = 25 V
g = 40 V
h = 63 V
i = 100 V
j = 125 V
m = 150 V
n = 160 V
q = 200 V
r = 250 V
s = 300 V
t = 350 V
u = 400 V
v = 500 V
w = 630 V
x = 1000 V
A = 1,6 V
B = 6 V
C = 12 V
D = 15 V
E = 20 V
F = 35 V
G = 50 V
H = 75 V
I = 80 V

26338

...ligeleiders zijn
...ische ontladingen

...tijdens reparatie kan
...oen verminderen.
...reparatie via een
...verbonden bent met
...massa van het

...middelen ook op

...conductori sono
...iche (ESD).
...essere fortemente
...vazione della più
...manipolazione.
...ere quindi essere
...eriale che quello della
...mite un braccialetto

...esti e anche gli utensili
...anche a questo

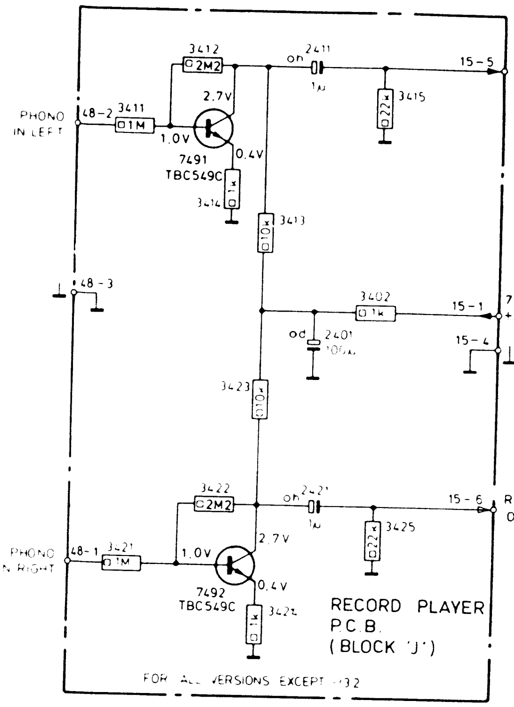
| | | |

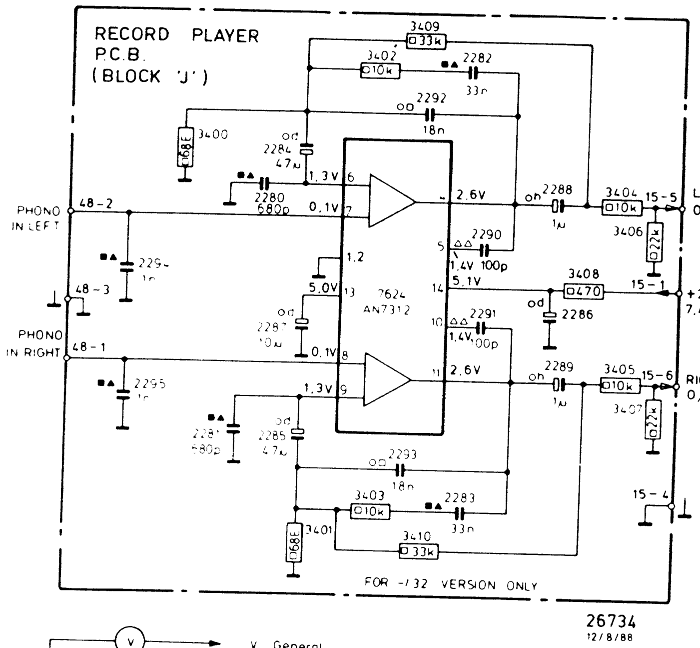
| | | |

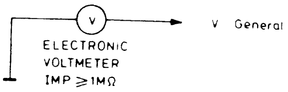
| | | |

| | | |

MISC	7491 7492 · 7624
CAP	2411 · 2421 2401 · 2294 2295 · 2281 · 2284 2287 · 2280 2285 · 2292 2282 2290 2288 2286 · 2293 2283 2291 2289
RES	3411 3421 · 3412 3414 · 3422 3423 3424 · 3413 · 3402 3425 · 3415 · 3400 · 3401 · 3402 3403 · 3409 3410 · 3408 3404–3407







Measurement done with AC supply

7621/7622
1 - 0V
2 - -
3 - -
4 - 3.5V
5 - -
6 - 1.3V
7 - -
8 - -
9 - 1.3V
10 - -
11 - 3.5V
12 - -
13 - 6.9V
14 - 6.9V

7623
1 - 0V
2 - 0.9V
3 - -
4 - 5.1V
5 - -
6 - 1.2V
7 - -
8 - -
9 - 1.2V
10 - -
11 - 5.1V
12 - -
13 - 10.0V
14 - 10.1V

7624
1 - 0V
2 - 0V
3 - -
4 - 2.6V
5 - 1.4V
6 - 1.3V
7 - 0.1V
8 - 0.1V
9 - 1.3V
10 - 1.4V
11 - 2.6V
12 - -
13 - 5.0V
14 - 5.1V

7491/7492
e - 0.4V
b - 1.0V
c - 2.7V

7431
e - [11.1V] 11.1V
b - [11.0V] 10.2V
c - [-] 10.2V

7432
e - [7.3V] 0V
b - [3.6V] 0V
c - [11.1V] 11.1V

7433
e - [0V] 0V
b - [0.1V] 0.7V
c - [11.0V] -

7401/7501
e - 0V
b - 0.6V
c - -

7402/7502
e - 0V
b - 0.6V
c - -

7403/7503
e - 0V
b - (0.7V ▷)
c - -

7429
e - (6.6V ▷) (5.9V ▷▷)
b - (6.0V ▷) (5.3V ▷▷)
c - (6.6V ▷) (5.9V ▷▷)

7430
e - (4.5V ▷) (5.4V ▷▷)
b - (3.8V ▷) (5.9V ▷▷)
c - (4.5V ▷) (- ▷▷)

7405
e - 0.1V
b - 0.7V
c - 1.6V

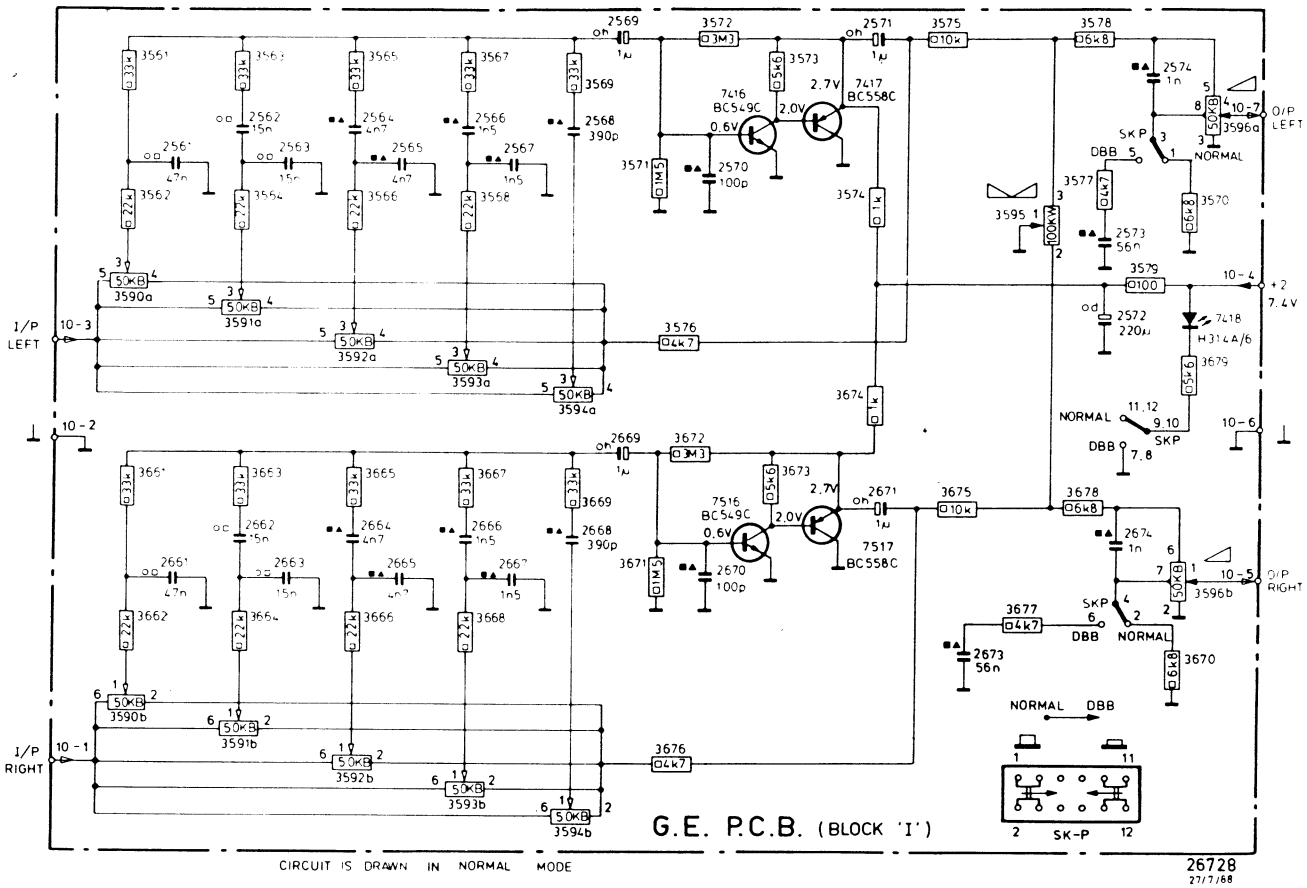
7414
e - 0V
b - 0.7V
c - -

7415/7515
e - 0.1V
b - 0.8V
c - 3.6V

7454
e - (- ▷) (- ▷▷)
b - (0.6V ▷) (- ▷▷)
c - (- ▷) (- ▷▷)

7453
e - (10.6V ▷) (10.4V ▷▷)
b - (10.0V ▷) (- ▷▷)
c - (10.6V ▷) (7.6V ▷▷)

MISC						7416 7516	7417 7517				7418
CAP	2561	2562 2563	2564 2565	2566 2567	2568 2569	2570	2571	2673	2573 2574		
	2661	2662 2663	2664 2665	2666 2667	2668 2669	2670	2671		2572 2674		
RES	3561 3562	3563 3564	3565 3566	3567 3568	3594a 3569 3571 3576 3572		3573 3574	3575	3677	3578 3579	3570 3596a
	3590a 3590b	3591a 3591b	3592a 3592b	3593a 3593b	3594b 3669 3671 3672		3673 3674	3675		3577	3679 3596b
	3661 3662	3663 3664	3665 3666	3667 3668	3676				3595	3678	3670



FROM AF P.C.B.

TO AF P.C.B.

| | | |

| | | |

POWER SUPPLY PANEL P018

Miscellaneous		
1000	4822 249 10334	R/P Head
1002	4822 249 20072	Erase head
1003	4822 253 30027	Fuse T3.15A
1021	4822 242 70761	Crystal 4.5 MHz
1104	4822 276 12502	Switch push 4P2T
1110	4822 267 30633	Socket aerial
1111	4822 276 12276	Switch key
1120	4822 276 12345	Switch push 2P2T
1121	4822 277 21264	Switch slide 2P3T
1201	4822 278 90564	Switch leaf
1203	4822 276 12347	Switch push assy
1205	4822 276 12348	Switch slide 3P2T
1206	4822 276 12349	Switch push
SKQ	4822 272 10225	Voltage selector
1210	4822 265 20291	Socket mains
1211	4822 267 30631	Socket cinch assy
1212	4822 267 30968	Socket headphone
1213	4822 264 30237	Socket micro D6.3
1214	4822 290 60673	Socket push terminal
1701	4822 253 20089	Fuse T0.63A
4001	4822 361 21089	12 V NMI-6H2LWDA
7181	4822 134 40885	5 V 115 mA

C		
2109	4822 122 33157	Elco 47 nF 5.5 V
2131	4822 121 51377	160 V 620p
2132	4822 121 51376	160 V 549p
2139	4822 125 60101	Trim 100 V 11p
2187	4822 122 33653	50 V 91p

R		
3163	4822 100 20166	Preset 10k
3580	4822 111 30511	NFR25 12E
3590	4822 105 11013	Potm. slide 50KBX2
3595	4822 105 11012	Potm. slide 100 kW
3596	4822 102 30465	Potm. rot 50KBX2

S		
5103	4822 156 30947	FM RF coil
5106	4822 156 11045	MW Osc coil
5107	4822 158 60583	MW LW Ant assy
5109	4822 156 10688	IFT AM WT
5110	4822 156 10726	IFT AM YW
5111	4822 242 71856	Cer. filter
5113	4822 242 72097	Cer. filter
5115	4822 157 53808	Ind. 220 µH
5200	4822 146 30718	Transformer, mains
5290	4822 157 53809	Ind. 680 µH

D		
7101	4822 130 30621	1N4148
7124	4822 130 81091	BB304
7128	4822 130 31129	BB212
7140	4822 130 34174	BZX79C4V7
7141	4822 130 34173	BZX79C5V6
7142	4822 130 34297	BZX79C10V
7146	4822 130 30862	BZX79C9V1
7251	5322 130 31504	BZX79C3V3
7254	4822 130 33774	S5VB10
7256	4822 130 34488	BZX79C11V
7257	4822 130 34382	BZX79C8V2
7259	4822 130 80986	PLED H314A/6

TS		
7302	4822 130 60163	2SC1047C
7303	4822 130 60093	2SA838B
7304	4822 130 44196	TBC548C
7305	5322 130 60068	BC558C
7311	4822 130 40938	TBC548
7310	4822 130 40937	TBC548B
7314	4822 130 44235	BD233
7315	4822 130 44196	1402E
7414	4822 130 41344	BC337-40
7416	4822 130 44246	BC549C
7429	4822 130 44104	180Z
7431	4822 130 41691	BC556B
7491	4822 130 44246	TBC549C
7550	4822 130 90607	LTP7B8151A

IC		
7551	4822 209 10264	MN4069UB
7552	4822 209 11443	UPD1713AG-575
7554	4822 209 72097	CXA1111P
7555	4822 209 71321	AN7411
7556	4822 209 71901	NJM78L05A
7621	4822 209 70997	AN7312
7630	4822 209 73356	AN7161N(FP)

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

Service
Service
Service

Service Manual

For the follwing stroke versions we do not publish a seperate manual, please use the manual as given below:

F1385/00/60	refers to	F1385/30
F1385/61	refers to	F1385/31
F1385/62	refers to	F1385/32
F1385/65	refers to	F1385/35
F1385/68	refers to	F1385/38
F1385/70	refers to	F1385/40

Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Servicio

Subject to modification
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